Name:

Exam Style Questions

Algebraic Fractions

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 21
Video 22
Video 23
Video 24

1. Simplify fully

$$\frac{x}{3} + \frac{x}{4}$$

....
(2)

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2. Express as a single fraction

$$\frac{w}{2} - \frac{w + 1}{7}$$

....
(3)

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3. Express as a single fraction

$$\frac{v + 3}{2} + \frac{2v + 1}{5}$$

....
(3)

4. Express as a single fraction

$$\frac{w}{7} - \frac{w+2}{5}$$

....

(3)

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5. Simplify

$$\frac{3}{2w} + \frac{5}{3w}$$

....

(3)

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6. Simplify

$$\frac{2}{3y} - \frac{1}{5y}$$

....

(3)

7. Express as a single fraction

$$\frac{1}{x+1} + \frac{4}{x-2}$$

....
(3)

8. Express as a single fraction.

$$\frac{3x+1}{4} + \frac{2x-1}{3}$$

....
(3)

9. Simplify

$$\frac{w}{2} \times \frac{w}{4}$$

....
(1)

10. Simplify fully.

$$\frac{3a}{2} \times \frac{4}{5a}$$

....
(2)

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11. Simplify fully.

$$\frac{5a^3}{6y} \times \frac{4a^2y}{2ay}$$

....
(2)

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12. Simplify fully.

$$\frac{c - 2}{4} \times \frac{12}{2c - 4}$$

....
(2)

13. Simplify fully.

$$\frac{w}{2} \div \frac{w}{6}$$

....

(2)

14. Simplify fully.

$$\frac{v + 3}{2} \div \frac{3v + 9}{5}$$

....

(2)

15. Simplify fully.

$$\frac{v + 3}{15} \div \frac{v^2 + 3v}{25}$$

....

(3)

16. Simplify

$$\frac{x^2 + 8x}{x^2 + 10x + 16}$$

....

(3)

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17. Simplify

$$\frac{x^2 - 3x + 2}{x^2 + 5x - 6}$$

....

(3)

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18. Simplify fully.

$$\frac{4x^2 - 25}{6x^2 - 11x - 10}$$

....

(3)

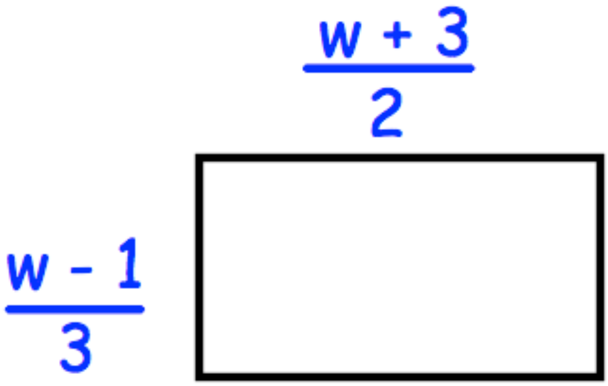
19. Write as a single fraction in its simplest form.

$$\frac{w}{w + 3} - \frac{5}{w(w + 3)}$$

....
(3)

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20. Write an expression for the area of the rectangle.



....
(3)

21. Given

$$x = \frac{c}{3} \qquad y = \frac{ac}{4} \qquad z = \frac{a^2}{2c + 1}$$

Find an expression for:

(a)

$$x^2$$

....

(2)

(b)

$$x + y$$

....

(2)

(c)

$$\frac{xy}{z}$$

....

(4)

22. The length of the base of a triangle and its perpendicular height are:

base: $\dfrac{x + 5}{10}$ cm

height: $\dfrac{x - 1}{4}$ cm

Find an expression for the area of the triangle.

.........................cm^2

(4)